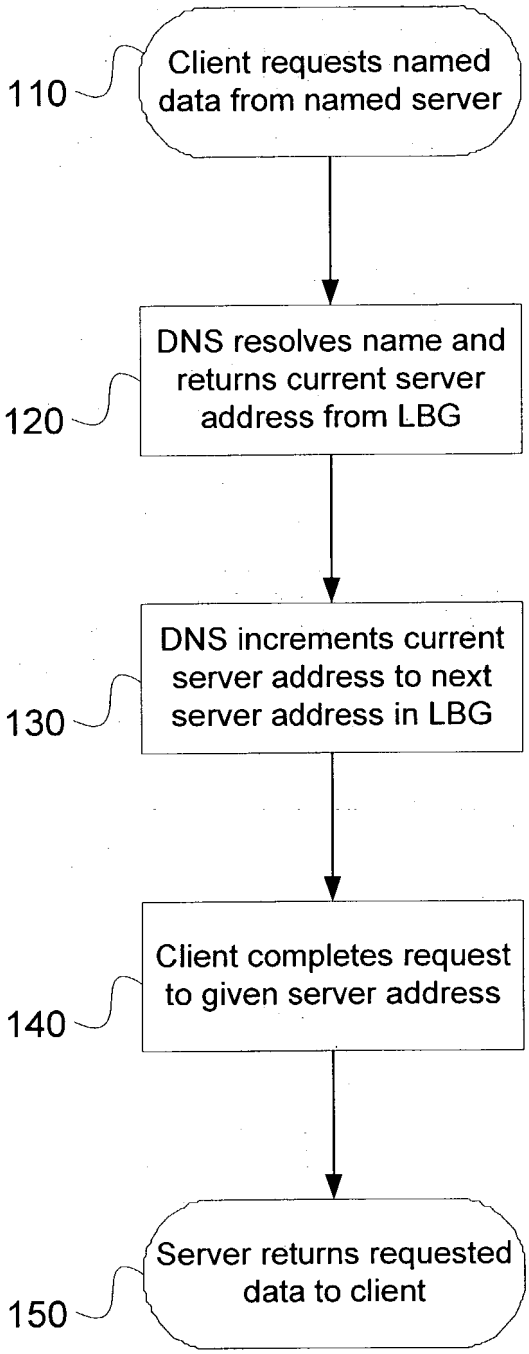

110
Client requests named data from named server
120
DNS resolves name and returns current server address from LBG
130
DNS increments current server address to next server address in LBG
140
Client completes request to given server address
150
Server returns requested data to client

Fig. 1

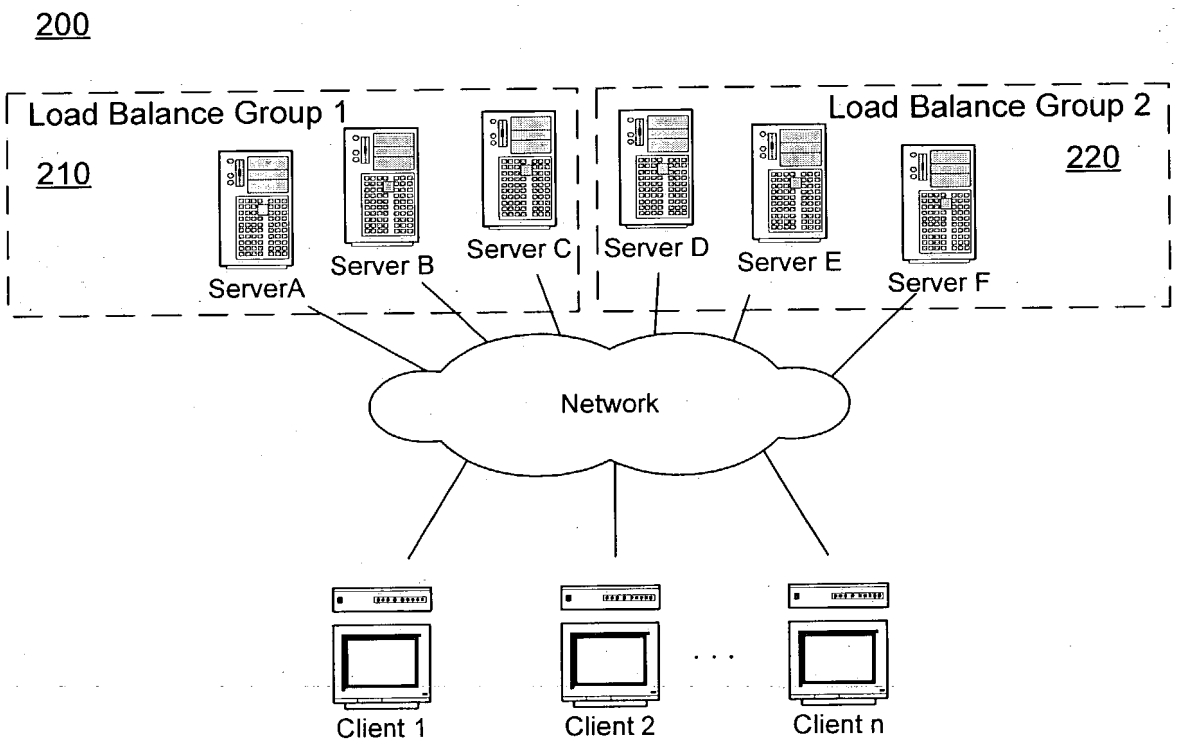


Fig. 2

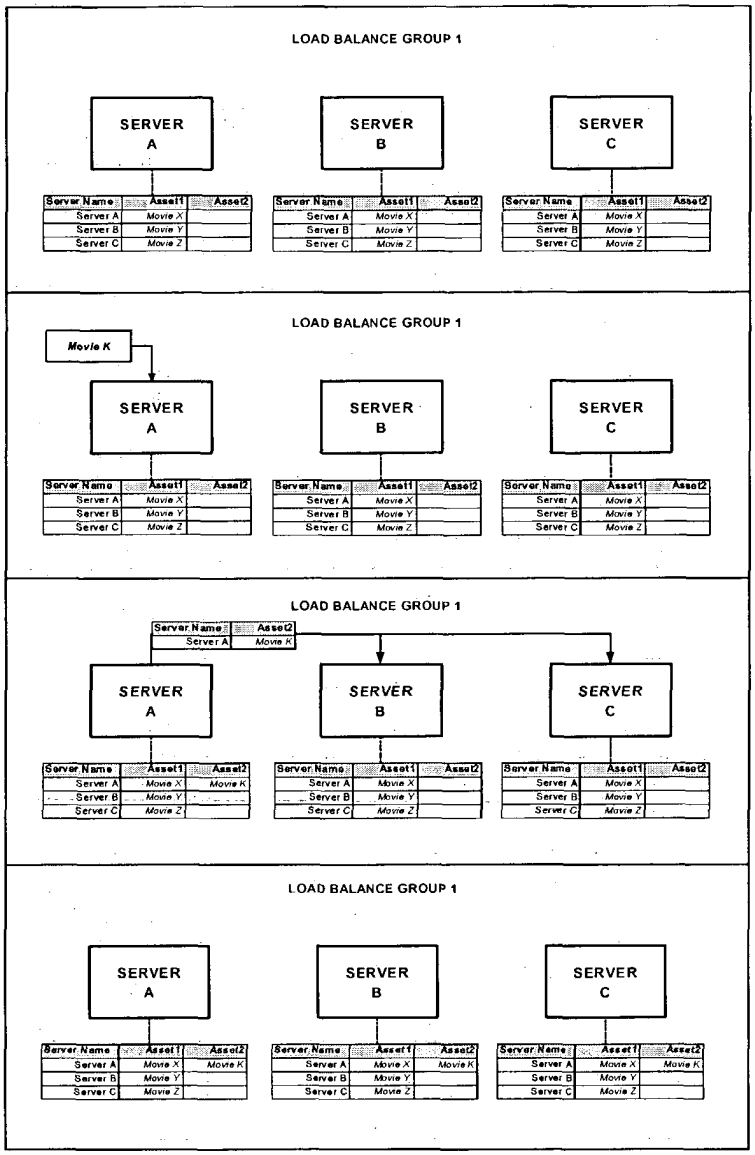
310

Server Name	SLB Para1	SLB Para2	SLB ParaN
Server A	*(data)*	*(data)*	*(data)*
Server B	*(data)*	*(data)*	*(data)*
Server C	*(data)*	*(data)*	*(data)*

320

Server Name	SLB Para1	SLB Para2	SLB ParaN
Server D	*(data)*	*(data)*	*(data)*
Server E	*(data)*	*(data)*	*(data)*
Server F	*(data)*	*(data)*	*(data)*

Fig. 3


LOAD BALANCE GROUP 1
SERVER A
SERVER B
SERVER C
Server Name | Asset1 | Asset2
Server A | Movie X
Server B | Movie Y
Server C | Movie Z
LOAD BALANCE GROUP 1
Movie K
SERVER A
SERVER B
SERVER C
LOAD BALANCE GROUP 1
Server Name | Asset2
Server A | Movie K
SERVER A
SERVER B
SERVER C
LOAD BALANCE GROUP 1
SERVER A
SERVER B
SERVER C

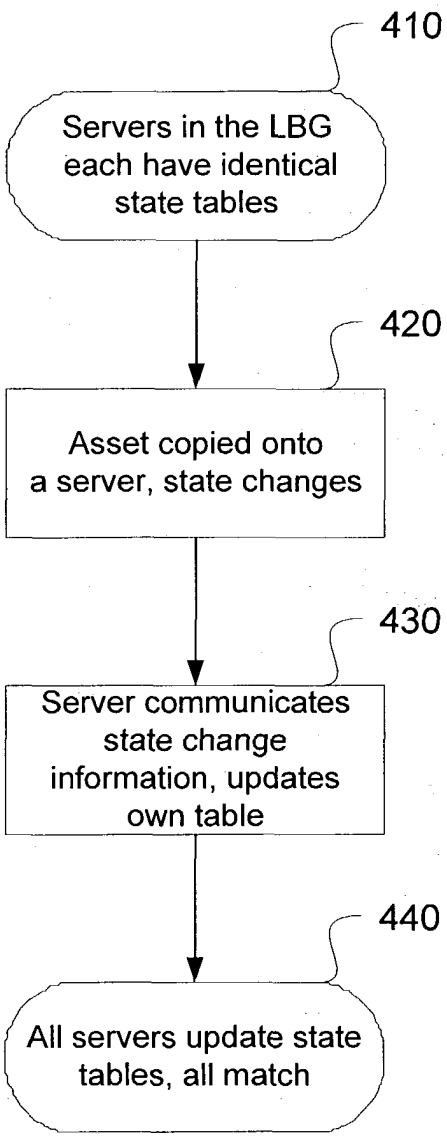

410
Servers in the LBG each have identical state tables
420
Asset copied onto a server, state changes
430
Server communicates state change information, updates own table
440
All servers update state tables, all match

Fig. 4

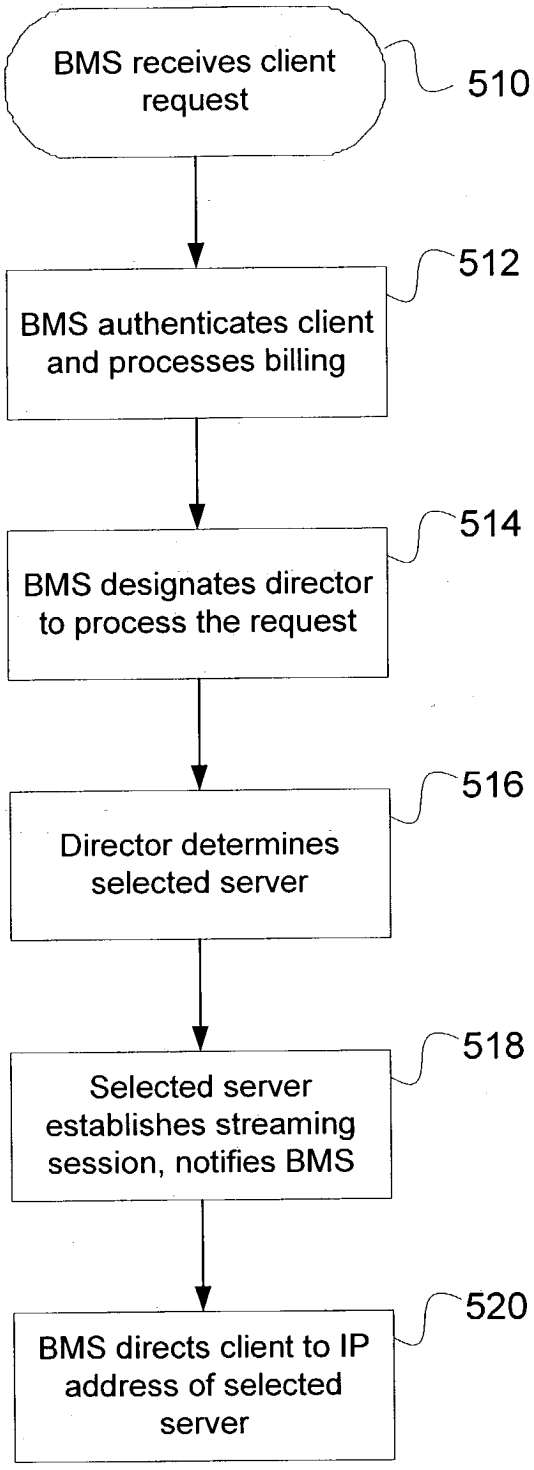

BMS receives client request
510
BMS authenticates client and processes billing
512
BMS designates director to process the request
514
Director determines selected server
516
Selected server establishes streaming session, notifies BMS
518
BMS directs client to IP address of selected server
520

Fig. 5A

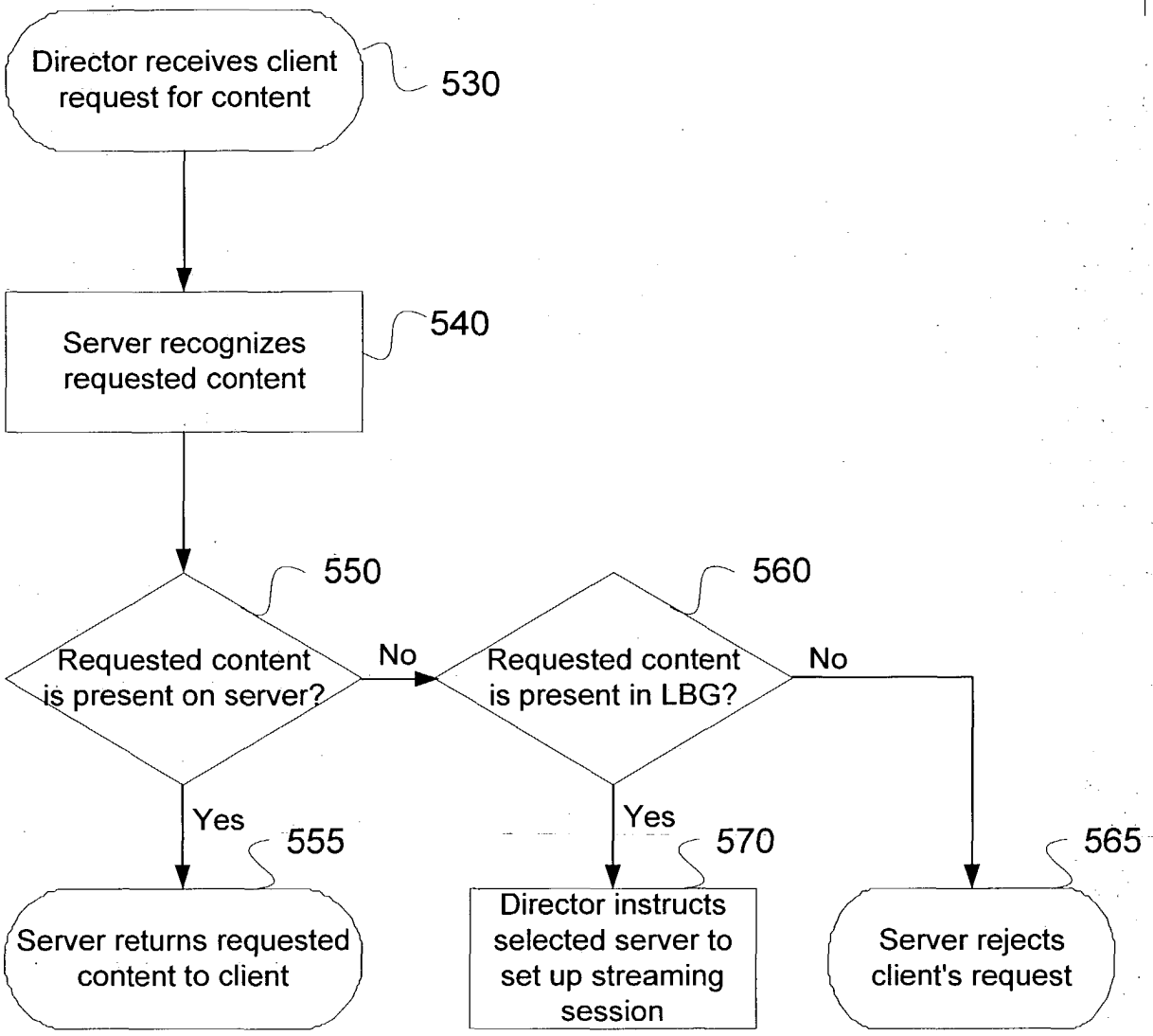

Director receives client request for content
530
Server recognizes requested content
540
550
Requested content is present on server?
No
560
Requested content is present in LBG?
No
Yes
555
Server returns requested content to client
Yes
570
Director instructs selected server to set up streaming session
565
Server rejects client's request

Fig. 5B

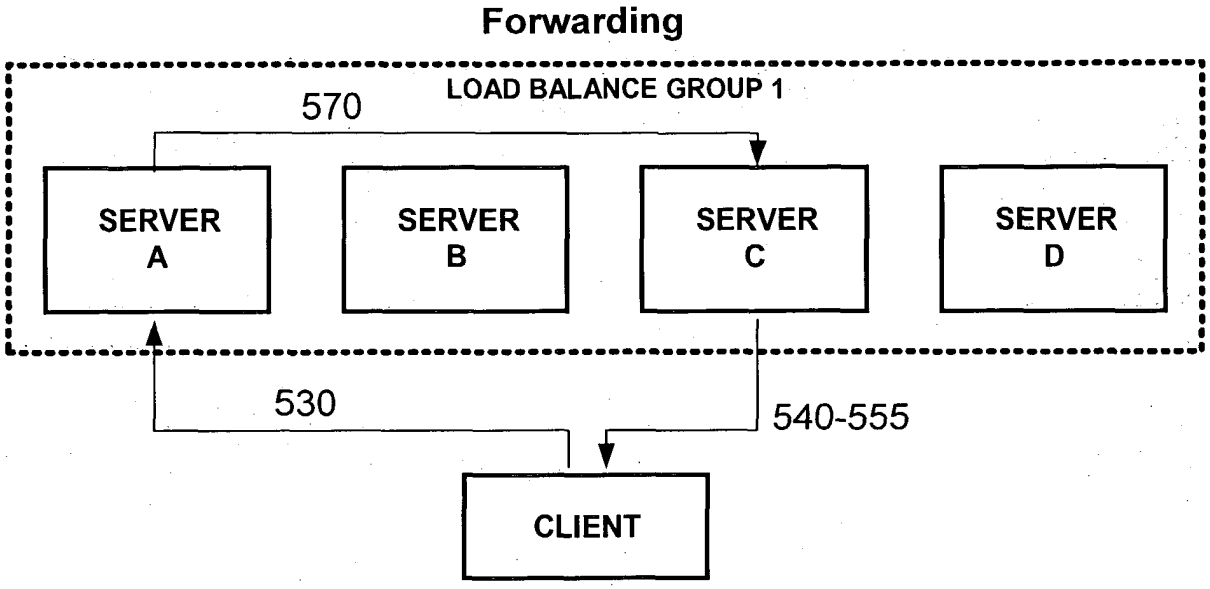

Forwarding
LOAD BALANCE GROUP 1
570
SERVER A
SERVER B
SERVER C
SERVER D
530
540-555
CLIENT

Fig. 5C

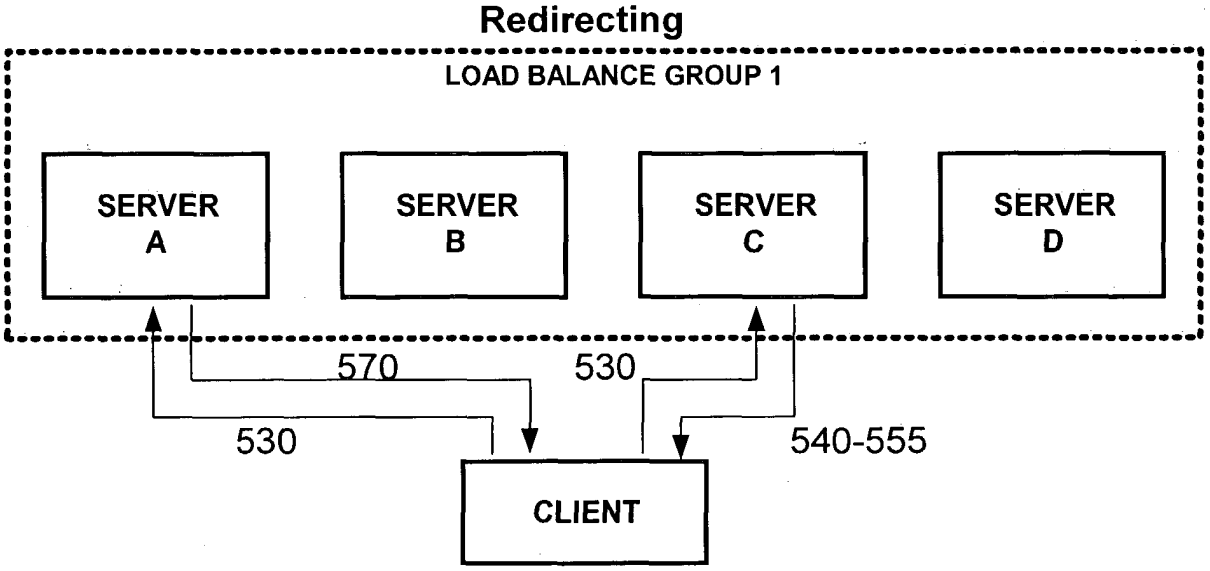

Redirecting
LOAD BALANCE GROUP 1
SERVER A
SERVER B
SERVER C
SERVER D
570
530
530
540-555
CLIENT

Fig. 5D

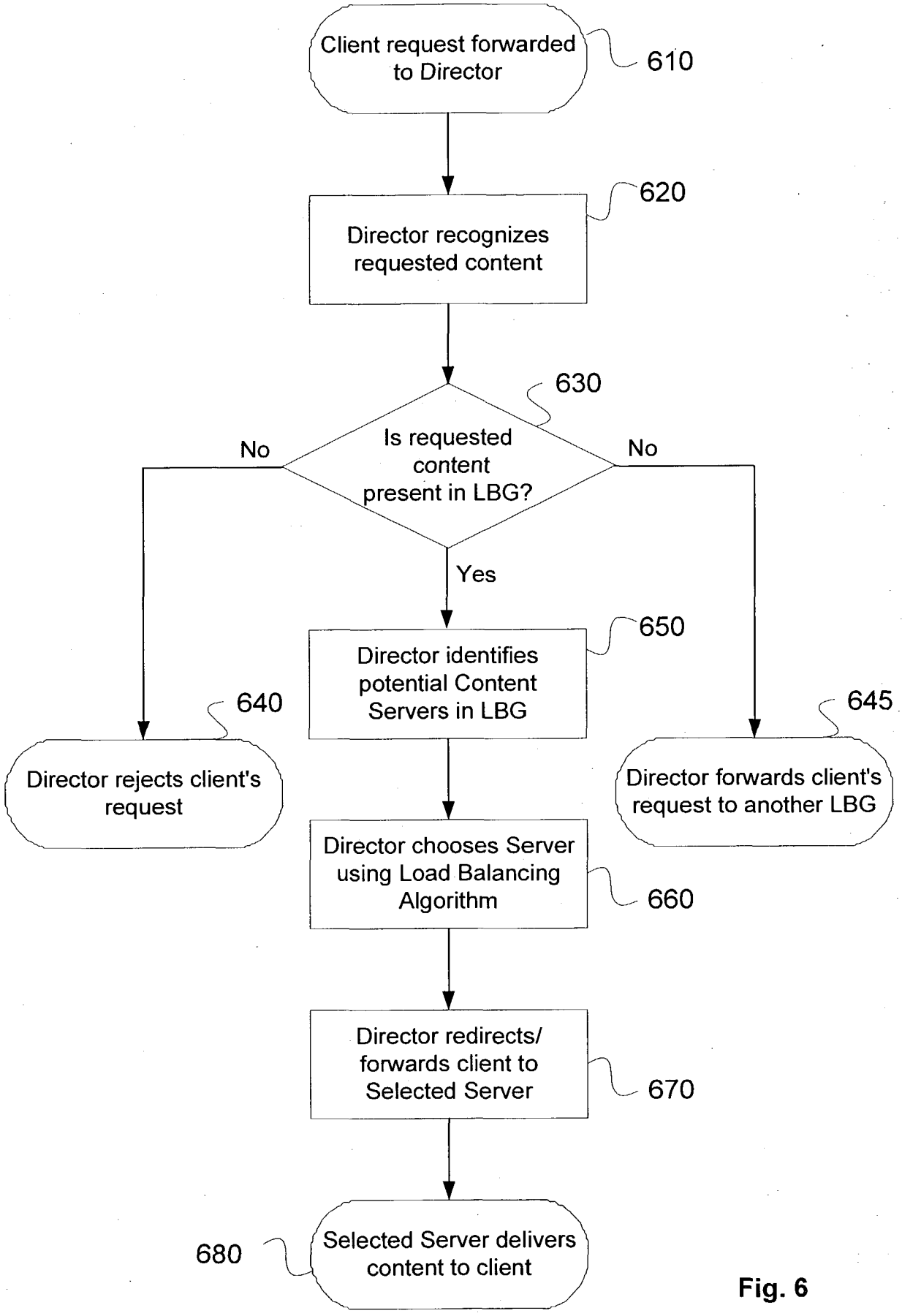

Client request forwarded to Director
610
Director recognizes requested content
620
Is requested content present in LBG?
630
No
No
Yes
Director identifies potential Content Servers in LBG
650
Director rejects client's request
640
Director forwards client's request to another LBG
645
Director chooses Server using Load Balancing Algorithm
660
Director redirects/ forwards client to Selected Server
670
Selected Server delivers content to client
680

Fig. 6

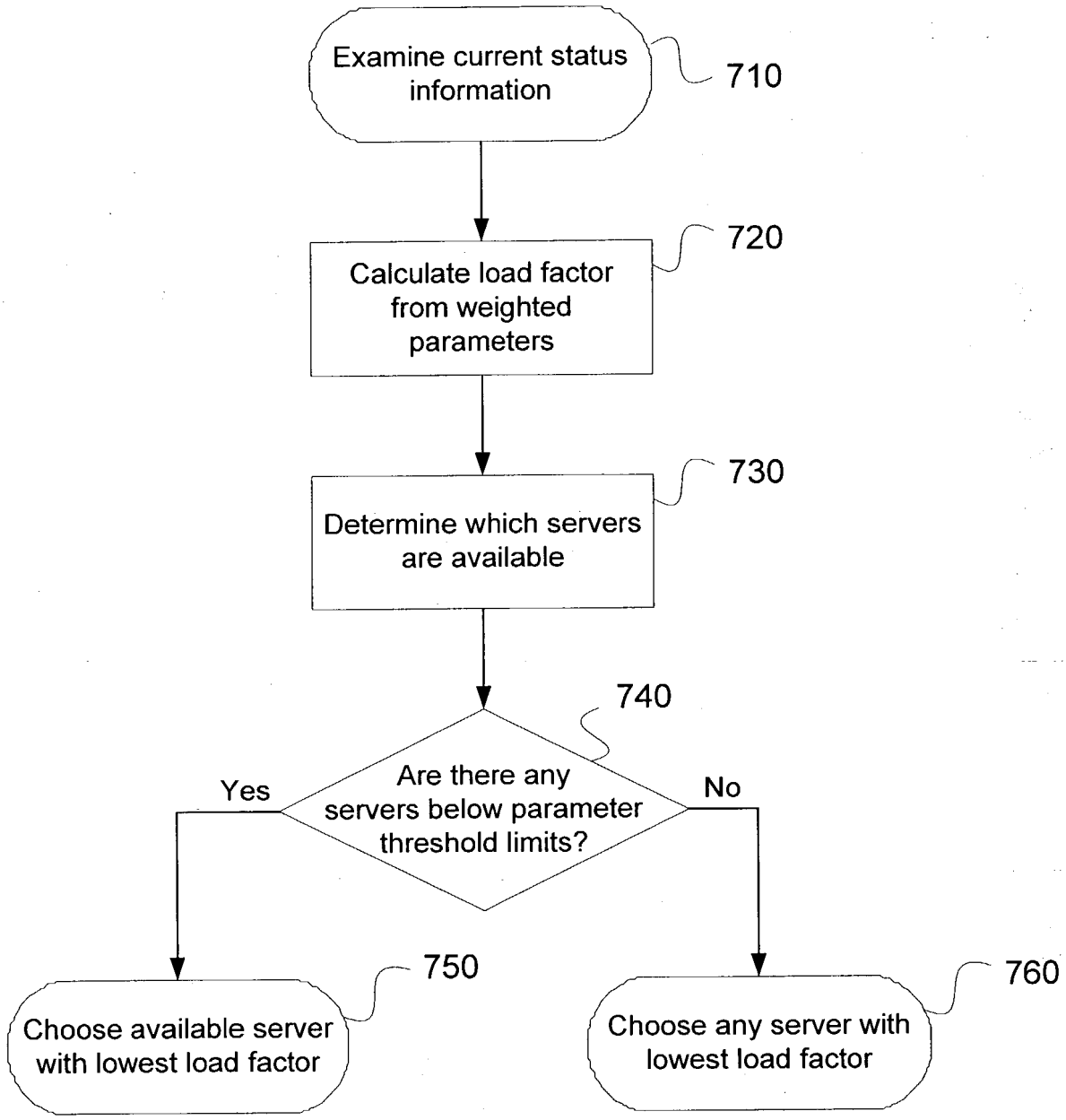

Examine current status information
710
Calculate load factor from weighted parameters
720
Determine which servers are available
730
Are there any servers below parameter threshold limits?
740
Yes
No
Choose available server with lowest load factor
750
Choose any server with lowest load factor
760

Fig. 7

Server	Status	Bandwidth incoming	outgoing	Storage usage	Memory usage	CPU utilization	Asset 1	Asset 2	...
A	up	47	275	34%	37%	40%	Dare Devil	Casablanca	
B	up	24	145	25%	22%	27%	Casablanca	Spiderman	
C	up	13	396	56%	60%	64%	Dare Devil	Spiderman	

Fig. 8